

ABSTRACT

Drive belt (3) provided with a continuous band (11) having a radially inwardly oriented surface (12) and a radially outwardly oriented surface (13), and with an array of plate-like transverse elements (20) engaging the continuous band (11). Said continuous band (11) being curved in a transverse direction at a crowning radius of curvature R_{crown} and being provided with an internal residual stress distribution defining a curling radius of curvature R_{curl} at which the band (11) would be curved in longitudinal direction when cut, whereby the continuous band (11) can be bent at a minimum radius of curvature R_{min} in longitudinal direction and whereby the ratio between the curling radius and the minimum radius $R_{\text{curl}}/R_{\text{min}}$ satisfies the equation:

$$R_{\text{curl}}/R_{\text{min}} = (\delta i + \delta o) / \delta o$$

wherein δi is the largest perpendicular distance in the radial direction between a neutral line NL in the cross section of the continuous band (11) where the stress due to pure longitudinal bending would be zero and the radially inner most surface (12) of the band (11) and δo is the largest perpendicular distance in the radial direction between the said neutral line NL and a radially outer most surface (13) of the band (11).